Amendment to the Specification:

Please replace the title on page 1 with the following title:

[[SYSTEM FOR]] GEOMETRICAL MODELING <u>OF STRUCTURAL PRODUCTS</u>

Please replace the first paragraph on page 1, lines 4-6 with the following amended paragraph:

The present invention relates in general to computational modeling of geometric structures [[involving the disclosures submitted with]] <u>referred to in a</u> prior copending application Serial No. 09/109,725 filed July 2, 1998, ~~with respect to which the present application is a continuation in part~~ <u>which was subsequently abandoned after filing of the present application</u>.

Please replace the last paragraph on page 13 beginning on line 11 with the following amended paragraph:

Connector objects are not limited to edge boundaries of topological view representation of type surface or face as that illustrated by way of example in FIGS. 13, 14, 15A and 15B. In regard to the connector function associated with the topological view diagrammed in FIG. 16, the connector function (g) is: $(i,j) \rightarrow (u, v, s,t)$. Here a connector object of type surface 42 is connecting and mapping the space between two overlapping surfaces 38 and 40. Three-dimensional solids or volumes, 44 and [[46]] <u>45</u>, illustrated in FIG. 17 are likewise related by a connector of type surface [[46]] ~~45~~ <u>46</u>. The connector objects in FIG 17 would have a functional relationship appearing, given the volume 44 defined as the spline function *(x1, y1, z1) = g(i,k,j)* and the volume 45 defined as the spline function *(x2, y2, z2) = f(u,v,w)*, as *(i,j,k,u,v,w)=r(l,m)*. The construction of the connector would ensure that for a given *(l,m)* on function *r* a set of parametric locations *(i,j,k,u,v,w)* would be returned such that if evaluated against their respective functions *g* and *f* would return the same Cartesian location *(x,y,z)*.

CJB 08 DEC. 2004

defining a property for each of said Topological Views to represent a physical, functional or a behavioral characteristic of said region of said physical body or said product model; and

wherein said Topological View is selected from the group consisting of said Face entity, Surface entity and Solid entity,

defining said Surface entity with properties;

defining said Face entity with properties and EdgeLoop boundaries;

defining said Solid entity with properties and OrientedClosedShell entity boundaries;

defining said Surface entity properties, said Face entity properties and said Solid entity properties for each of said Topological Views to represent said physical, functional or behavioral characteristic or said region of said physical body or product model; and

wherein a first parametric geometric base entity of said Ppoint is said Pcurve,

CJB 08 DEC. 2004

wherein ~~said~~ a second parametric geometric base entity of said Pcurve is said Surface entity,

wherein said Edge entity is a segment of said Pcurve bounded by 2 Ppoints entities,

wherein said EdgeLoop entity is at least one connected Edge entity that is a closed loop, and

wherein said EdgeLoop entity is a boundary for said Face entity,

defining a sharing of an Edge entity by 2 or more EdgeLoop entities sharing said Surface entity.

15. (New): A method of product modeling used in computer-aided-design to represent physical bodies or product design from geometric entities of multiple dimensionality, topology and connectivity said method comprising the steps of:

defining by instantiation a geometric data entity,

wherein each of said geometric data entity is selected from a group consisting of at least one Cartesian location, at least one Ppoint entity, at least one Pcurve entity, at least one Edge entity, at least one CoEdge entity, and at least one CoPoint entity,

defining said Surface entity with properties;

defining said Face entity with properties and EdgeLoop boundaries;

defining said Solid entity with properties and OrientedClosedShell entity boundaries;

defining said Surface entity properties, said Face entity properties and said Solid entity properties for each of said Topological Views to represent said physical, functional or behavioral characteristic or said region of said physical body or product model; and

wherein a first parametric geometric base entity of said Ppoint is said Pcurve,

GB 08 DEC. 2004

wherein ~~said~~ a second parametric geometric base entity of said Pcurve is said Surface entity,

wherein said Edge entity is a segment of said Pcurve bounded by 2 Ppoints entities,

wherein said EdgeLoop entity is at least one connected Edge entity that is a closed loop, and

wherein said EdgeLoop entity is a boundary for said Face entity,

defining an overlapping of at least two EdgeLoop boundaries sharing said Surface entity.

14. (New): A method of product modeling used in computer-aided-design to represent physical bodies or product design from geometric entities of multiple dimensionality and topology, said method comprising the steps of:

defining by instantiation a geometric data entity,

wherein each of said geometric data entity is selected from a group consisting of at least one Cartesian location, at least one Ppoint entity, at least one Pcurve entity, at least one Edge entity, at least one CoEdge entity, at least one CoPoint entity, at least one EdgeLoop entity, at least one Surface entity, at least one Face entity, at least one OrientedClosedShell entity and at least one Solid entity;

establishing at least one Topological View using said geometric data entity to represent a physical region of a physical body or a product model;